

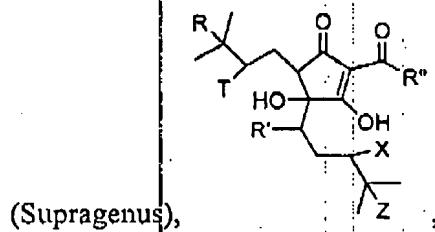
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 Application No. 10/789,817  
 Filing date: February 27, 2004

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AMENDMENTS TO THE CLAIMS:

1. (CURRENTLY AMENDED) A composition comprising a compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids; fraction isolated or derived from hops and a methylxanthine.
2. (CURRENTLY AMENDED) The composition of claim 1, wherein the compound fraction isolated or derived from hops is selected from the group consisting of alpha-acids, isoalpha-acids, reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids is derived from hops, beta acids, and spent hops.
3. (CURRENTLY AMENDED) The composition of claim 1, wherein the compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction isolated or derived from hops comprises a member-compound of a supragenus having the formula:



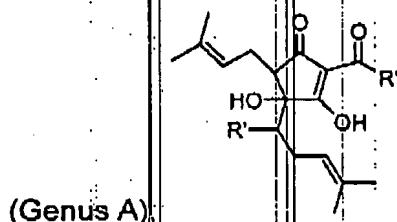
wherein R' is selected from the group consisting of carbonyl, hydroxyl, OR, and OCOR, wherein R is alkyl;

wherein R'' is selected from the group consisting of CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, and CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>;

and wherein R, T, X, and Z are independently selected from the group consisting of H, F, Cl, Br, I, and π orbital, with the proviso that if one of R, T, X, or Z is a π orbital, then the adjacent R, T, X, or Z is also a π orbital, thereby forming a double bond.

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4. (CURRENTLY AMENDED) The composition of claim 1, wherein said compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction isolated or derived from hops comprises a member-compound of Genus A having the formula:

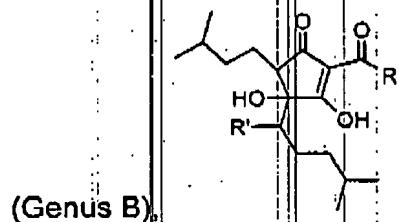


(Genus A),

wherein R' is selected from the group consisting of carbonyl, hydroxyl, OR, and OCOR, wherein R is alkyl;

and wherein R" is selected from the group consisting of CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, and CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>.

5. (CURRENTLY AMENDED) The composition of claim 1, wherein the compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction isolated or derived from hops comprises a member-compound of Genus B having the formula:



(Genus B),

wherein R' is selected from the group consisting of carbonyl, hydroxyl, OR, and OCOR, wherein R is alkyl;

and wherein R" is selected from the group consisting of CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, and CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>.

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6. (CURRENTLY AMENDED) The composition of claim 1, wherein said compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction isolated or derived from hops comprises a member compound selected from the group consisting of humulone, cohumulone, adhumulone, isohumulone, isocohumulone, isoadhumulone, dihydro-isohumulone, dihydro-isocohumulone, dihydro-adhumulone, tetrahydro-isohumulone, tetrahydro-isocohumulone, tetrahydro-adhumulone, hexahydro-isohumulone, hexahydro-isocohumulone, and hexahydro-adhumulone.

7. (ORIGINAL) The composition of claim 1, wherein said methylxanthine is selected from caffeine; theobromine; theophylline; aminophylline; doxofylline; pentoxifylline; 8-oxopentoxifylline; 8-oxolisofylline; lisofylline; 1-proparagyl 3,7-dimethyl xanthine; 7-proparagyl 1,3-dimethyl xanthine; 3-proparagyl 1,7-dimethyl xanthine; 1,3,7-tripropargyl xanthine; 3-isobutyl-1-methylxanthine (IBMX); 1,3,7-tripropyl xanthine; 7-benzyl-IBMX; 1-propyl 3,7-dimethyl xanthine; 1,3-dipropyl 7-methyl xanthine; 1,3-dipropyl 7-proparagyl xanthine; 3,7-dimethyl 1-propyl xanthine; and 7-allyl 1,3-dimethyl xanthine.

8. (CURRENTLY AMENDED) The composition of claim 1, wherein the compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction isolated or derived from hops and methylxanthine are in a ratio of about 100:1 to about 1:100.

9. (CURRENTLY AMENDED) The composition of claim 8, wherein the fraction isolated or derived from hops is reduced isoalpha acid and the methylxanthine is caffeine.

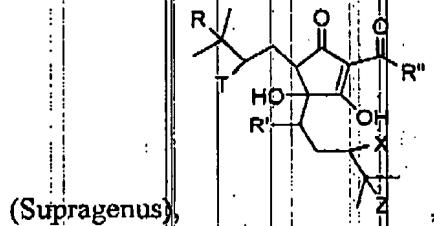
10. (CURRENTLY AMENDED) The composition of claim 1, wherein the composition comprises about 0.5 to 10000 mg of said compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction isolated or derived from hops.

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11. (CURRENTLY AMENDED) The composition of claim 10, wherein the composition comprises about 50 to 7500 mg of the compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids-fraction isolated or derived from hops.
12. (CURRENTLY AMENDED) The composition of claim 1, wherein the composition comprises about 0.001 to 10 weight percent of the compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction isolated or derived from hops.
13. (CURRENTLY AMENDED) The composition of claim 12, wherein the composition comprises about 0.1 to 1 weight percent of the compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction isolated or derived from hops.
14. (ORIGINAL) The composition of claim 1, wherein the composition further comprises a pharmaceutically acceptable carrier.
15. (ORIGINAL) The composition of claim 1, wherein the composition is formulated for administration orally, topically, parenterally, or rectally.
16. (CURRENTLY AMENDED) A composition comprising a compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids; fraction derived from hops and a curcuminoid.
17. (CURRENTLY AMENDED) The composition of claim 16, wherein the compound selected from the group consisting of fraction derived from hops is selected from isoalpha-acids, reduced isoalpha acids, tetra-hydroisoalpha acids, hexa-hydroisoalpha acids is derived from hops , and beta-acids.
18. (CURRENTLY AMENDED) The composition of claim 16, wherein the compound

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selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids,  
and hexa-hydroisoalpha acids fraction derived from hops comprises a member-  
compound of a supragenus having the formula:

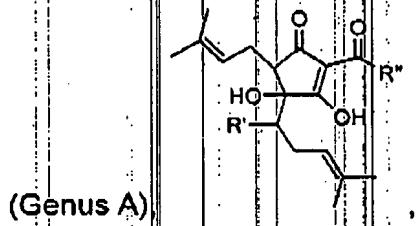


wherein R' is selected from the group consisting of carbonyl, hydroxyl, OR, and OCOR,  
 wherein R is alkyl;

wherein R'' is selected from the group consisting of CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, and  
 CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>;

and wherein R, T, X, and Z are independently selected from the group consisting of H,  
 F, Cl, Br, I, and π orbital, with the proviso that if one of R, T, X, or Z is a π orbital, then  
 the adjacent R, T, X, or Z is also a π orbital, thereby forming a double bond.

19. (CURRENTLY AMENDED) The composition of claim 16, wherein said compound  
selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids,  
and hexa-hydroisoalpha acids fraction derived from hops comprises a member  
compound of Genus A having the formula:

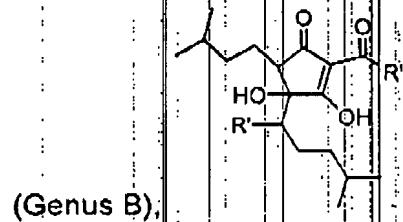


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wherein R' is selected from the group consisting of carbonyl, hydroxyl, OR, and OCOR,  
 wherein R is alkyl;

and wherein R" is selected from the group consisting of CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, and  
 CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>.

**20. (CURRENTLY AMENDED)** The composition of claim 16, wherein the compound  
selected from the group consisting of reduced isocalpha acids, tetra-hydroisoalpha acids,  
and hexa-hydroisoalpha acids fraction derived from hops comprises a member-  
compound of Genus B having the formula:



wherein R' is selected from the group consisting of carbonyl, hydroxyl, OR, and OCOR,  
 wherein R is alkyl;

and wherein R" is selected from the group consisting of CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, and  
 CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>.

**21. (CURRENTLY AMENDED)** The composition of claim 16, wherein said compound  
selected from the group consisting of reduced isocalpha acids, tetra-hydroisoalpha acids,  
and hexa-hydroisoalpha acids fraction derived from hops comprises a member-  
compound selected from the group consisting of isohumulone, isocohumulone,  
isoadhumulone, dihydro-isohumulone, dihydro-isocohumulone, dihydro-adhumulone,  
tetrahydro-isohumulone, tetrahydro-isocohumulone, tetrahydro-adhumulone,  
hexahydro-isohumulone, hexahydro-isocohumulone, and hexahydro-adhumulone.

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22. (ORIGINAL) The composition of claim 16, wherein said curcuminoid is selected from curcumin, demethoxycurcumin, bisdemethoxycurcumin, cis-trans-curcumin and cyclocurcumin.

23. (CURRENTLY AMENDED) The composition of claim 16, wherein the compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction derived from hops and the curcuminoid are in a ratio of about 100:1 to about 1:10.

24. (ORIGINAL) The composition of claim 23, wherein the ratio is about 3:2.

25. (CURRENTLY AMENDED) The composition of claim 24, wherein the fraction isolated from hops is reduced isoalpha acid and the curcuminoid is curcumin.

26. (CURRENTLY AMENDED) The composition of claim 16, wherein the composition comprises about 0.5 to 10000 mg of said compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction isolated or derived from hops.

27. (CURRENTLY AMENDED) The composition of claim 26, wherein the composition comprises about 50 to 7500 mg of the compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction isolated or derived from hops.

28. (CURRENTLY AMENDED) The composition of claim 16, wherein the composition comprises about 0.001 to 10 weight percent of the compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction isolated or derived from hops.

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29. (CURRENTLY AMENDED) The composition of claim 28, wherein the composition comprises about 0.1 to 1 weight percent of the compound selected from the group consisting of reduced isoalpha acids, tetra-hydroisoalpha acids, and hexa-hydroisoalpha acids fraction isolated or derived from hops.

30. (ORIGINAL) The composition of claim 16, wherein the composition further comprises a pharmaceutically acceptable carrier.

31. (ORIGINAL) The composition of claim 16, wherein the composition is formulated for administration orally, topically, parenterally, or rectally.

32. (ORIGINAL) A method of reducing inflammation, comprising administering a composition of any of claims 1-31.